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PTO/SB/21 (09-04)

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FORM**

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Total Number of Pages in This Submission

7

Application Number

10/823,483

Filing Date

04/12/2004

First Named Inventor

Avto TAVKHELIDZE

Art Unit

Examiner Name

Attorney Docket Number

**ENCLOSURES (Check all that apply)**

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
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	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="text"/> Remarks	
<input type="checkbox"/> Reply to Missing Parts/Incomplete Application		
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm Name			
Signature			
Printed name	Jonathan Sidney EDELSON		
Date	10/18/2004	Reg. No.	

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

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Typed or printed name	Robert L. Flye	Date	10/18/2004

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet **2** of **6****Complete if Known**

Application Number	10/823,483
Filing Date	04/12/2004
First Named Inventor	Avto TAVKHELIDZE
Art Unit	
Examiner Name	
Attorney Docket Number	

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
		US- 3,578,992	05-18-1971	Shimada, K.	
		US- 3,740,592 A	06-19-1973	Engdahl et al.	
		US- 3,843,896	10-22-1974	Rason et al.	
		US- 4,004,210	01-18-1977	Yater, J.C.	
		US- 4,039,352	08-02-1977	Marinescu, M.	
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		US- 4,011,582 A	03-08-1977	Cline et al.	
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		US- 4,224,461	09-23-1980	Snyder, Jr. et al.	
		US- 4,281,280	07-28-1981	Richards	
		US- 4,410,951	10-18-1983	Nakamura, T.	
		US- 4,423,347	12-27-1983	Kleinschmidt, P.	
		US- 4,667,126	05-19-1987	Fitzpatrick, G.O.	
		US- 4,937,489	06-26-1990	Hattori, S.	
		US- 4,958,201	09-18-1990	Mimura, T.	
		US- 5,028,835	07-02-1991	Fitzpatrick, G.O.	
		US- 5,049,775	09-17-1991	Smits, J.	
		US- 5,083,056	01-21-1992	Kondou, Y.	
		US- 5,119,151	06-02-1992	Onda, K.	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				

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Sheet **3** of **6****Complete if Known**

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		Number-Kind Code <sup>2</sup> (if known)			
		US- 5,233,205	08-03-1993	Usagawa, T.	
		US- 5,229,320	07-20-1993	Ugajin, R.	
		US- 5,247,223	09-21-1993	Mori, Y.	
		US- 5,351,412	10-04-1994	Furuhata, T.	
		US- 5,307,311	04-26-1994	Sliwa, Jr.	
		US- 5,371,388	12-06-1994	Oda, H.	
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		US- 5,410,166	04-25-1995	Kennel	
		US- 5,465,021	11-07-1995	Visscher, A.	
		US- 5,487,790	01-30-1996	Yasuda	
		US- 5,521,735	05-28-1996	Shimizu, A.	
		US- 5,592,042	01-07-1997	Takuchi, Y.	
		US- 5,675,972 A	10-14-1997	Edelson, J.S.	
		US- 5,699,668 A	12-23-1997	Cox, I.W.	
		US- 5,701,043	12-23-1997	Razzaghi, M.	
		US- 5,722,242 A	03-03-1998	Edelson, J.S.	
		US- 5,810,980	09-22-1998	Edelson, J.S.	

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Sheet 4 of 6

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		Number-Kind Code <sup>2</sup> (if known)			
		US- 5,874,039	02-23-1999	Edelson, J.S.	
		US- 5,917,156 A	06-29-1999	Nobori et al.	
		US- 5,981,071	11-09-1999	Cox, I.W.	
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		US- 5,973,259	10-26-1999	Edelson, J.S.	
		US- 5,994,638	11-30-1999	Edelson, J.S.	
		US- 6,084,173	07-04-2000	DiMatteo	
		US- 6,064,137	05-16-2000	Cox, R.T.	
		US- 6,089,311	07-18-2000	Edelson, J.S.	
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		US- 6,281,514	08-28-2001	Tavkhelidze, A.	
		US- 6,214,651 B1	04-10-2001	Cox	
		US- 2001/0046749 A1	11-29-2001	Tavkhelidze et al.	
		US- 6,417,060 B2	07-09-2002	Tavkhelidze et al.	
		US- 2003/0068431 A1	04-10-2003	Taliashvili et al.	
		US- 6,720,704 B1	04-13-2004	Tavkhelidze et al.	
		US-			
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STATEMENT BY APPLICANT**

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Application Number	10/823,483
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First Named Inventor	Avto TAVKHELIDZE
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Sheet 1 of 6

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		Number-Kind Code <sup>2</sup> (if known)			
		US- 2,510,397	06-06-1950	Hansell, C.W.	
		US- 2,915,652	12-01-1959	Hatsopoulos, G.N.	
		US- 3,021,472	02-13-1962	Hernqvist, K.G.	
		US- 3,118,107	01-14-1964	Gabor, D.	
		US- 3,194,989	07-13-1965	Garbuny	
		US- 3,169,200	02-09-1965	Huffman, F.N.	
		US- 3,173,032	03-09-1965	Maynard, J.T.	
		US- 3,238,395	03-01-1966	Sense, K.A.	
		US- 3,239,745	03-08-1966	Hernqvist, K.G.	
		US- 3,267,307	08-16-1966	Fox, R.	
		US- 3,267,308	08-16-1966	Hernqvist, K.G.	
		US- 3,281,372	10-25-1966	Haas, G.A.	
		US- 3,300,660	01-24-1967	Bensimon, J.	
		US- 3,328,611	06-27-1967	Davis, E.D.	
		US- 3,376,437	04-02-1968	Meyerand, Jr, R.G	
		US- 3,393,330	07-16-1968	Vary, A.	
		US- 3,470,393	09-30-1969	Moncorge, G.	
		US- 3,515,908	06-02-1970	Caldwell, F.	
		US- 3,519,854	07-07-1970	Davis, E.D.	

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		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				
		SU 861916 A	09-10-1981	Burmistrov, V.M		
		JP 404080964A	03-13-1992	Ando, Y.		
		WO 97/02460 A1	01-23-1997	Edelson, J.S.		
		WO 99/13562 A1	03-18-1999	Tavkhelidze et		
		WO 03/090245 A1	10-30-2003	Tavkhelidze et		

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NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		FITZPATRICK, G.O. ET AL. "Close-Spaced Thermionic Converters with Active Spacing Control and Heat Pipe Isothermal Emitters." IEEE.vol. 2: pp 920-927 (1996).	
		FITZPATRICK, G.O. ET AL. "Demonstration of Close-Spaced Thermionic Converters." Abs. Papers. Am. Chem. Soc. 93355: pp 1.573-1.580 (1993).	
		MAHAN, G.D. "Thermionic Refrigeration." J. Appl. Phys 76: pp 4362-4366 (1994).	
		HUFFMAN, F.N. ET AL. "Preliminary Investigation of a Thermotunnel Converter." I.E.C.E.C. vol. 1: pp 573-579 (1988).	
		HOUSTON. J.M. "Theoretical Efficiency of the Thermionic Energy Converter." J.Appl. Phys. 30: pp 481-487 (1959).	
		KING. D.B. ET AL. "Results from the Microminiature Thermionic Converter Demonstration Testing Program." Am. Inst. of Phys. 1-56396-846: pp 1432-1436 (1999).	
		ZENG. T AMD CHEN. G. "Hot Electron Effects on Thermionic Emission Cooling in Heterostructures." Mat. Res. Soc. 545: pp 467-472 (1999).	
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		SVENSSON, R. AND HOLMID. L. "TEC as Electric Generator in an Automobile Catalytic Converter." IEEE. vol. 2: pp 941-944 (1996).	

Examiner Signature		Date Considered	
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Sheet

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		FITZPATRICK G O ET AL: "Updated perspective on the potential for thermionic conversion to meet 21st century energy needs" IECEC'97. PROCEEDINGS OF THE 32nd INTERSOCIETY ENERGY CONVERSION ENGINEERING CONFERENCE. ENERGY SYSTEMS, RENEWABLE ENERGY RESOURCES, ENVIRONMENTAL IMPACT AND POLICY IMPACTS ON ENERGY. HONOLULU, HI. JULY 27 - AUG. 1, 1997. INTERSOCIETY ENERGY CONVERS. vol 3 & 4, 27 July 1997 (1997-07-27). pages 1045-1051.	
		KALANDARISHVILI A G: "The basics of the technology of creating a small interelectrode spacing in thermionic energy converters with the use of two-phase systems" IECEC'97. PROCEEDING OF THE 32nd INTERSOCIETY ENERGY CONVERSION ENGINEERING CONFERENCE. ENERGY SYSTEMS, RENEWABLE ENERGY RESOURCES, ENVIRONMENTAL IMPACT AND POLICY IMPACTS ON ENERGY. HONOLULU, HI. JULY 27 - AUG 1, 1997. INTERSOCIETY ENERGY CONVERS. vol. 3 & 4, 27 July 1997 (1997-07-27). pages 1052-1056.	

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